Form 3160-5
(August 2007)

HOBBS OCD

DEC 02 2016

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOCD
Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM118723

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
SD WE 23 FED P7 4H

2. Name of Operator
CHEVRON USA INC

Contact: DENISE PINKERTON
E-Mail: leakejd@chevron.com

9. API Well No.
30-025-43089-00-X1

3a. Address
1616 W. BENDER BLVD
HOBBS, NM 88240

3b. Phone No. (include area code)
Ph: 432-687-7375

10. Field and Pool, or Exploratory
JENNINGS

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 14 T26S R32E SESE 215FSL 623FEL

11. County or Parish, and State
LEA COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Drilling Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

04/19/2016: SPUD WELL. DRILL SURFACE HOLE 112-285, 841.

04/20/2016: RUN 13 3/8",54.5#,J-55,STC CSG SET @ 831'. FC @ 790'.PRESS TEST LINES TO 3400PSI. PMP 40 BBLS SPACER @ 8.3PPG. CMT W/960 SX CL C CMT @ 14.8PPG. BUMP PLUG W/515PSI OVER FINAL CIRC PRESS. FULL RETURNS THROUGHOUT JOB. 102 BBLS CMT TO SURF. CMT IN PLACE @ 15:18. TEST CSG TO 1500PSI FOR 30 MINS. GOOD.

04/22/2016: DRILL INTERMEDIATE HOLE 851-917, 1302, 2074, 2588, 3250, 3669, 4291, 4483, 4587.

04/24/2016: RUN 9 5/8",40#,HCK-55 LTC INTERMEDIATE CSG SET @ 4577'. FC @ 4492'. PRESS TEST LINES TO 500PSIL/3000PSIH. CMT W/1055 SX LEAD @ 11.9PPG, & 462 SX TAIL @ 14.8PPG. BUMP PLUG W/500PSI OVER FINAL CIRC PRESS @ 1700PSI. FULL RETURNS THROUGHOUT JOB. FINAL CIRC PRESS PRIOR TO BUMPING PLUG

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #353502 verified by the BLM Well Information System
For CHEVRON USA INC, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 10/04/2016 (17PP0008SE)

Name *(Printed/Typed)* DENISE PINKERTON — Title REGULATORY SPECIALIST

Signature (Electronic Submission) — Date 10/04/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title _____ Date NOV 4 2016

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

ACCEPTED FOR RECORD
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #353502 that would not fit on the form

32. Additional remarks, continued

1200PSI @ 2.2BPM. 524 SX CMT RETURNED TO SURF. CMT IN PLACE @ 13:00 HRS. WOC.

04/25/2016: TAG CMT @ 4475. TEST CSG TO 2800PSI FOR 30 MINS. DRILL 10' NEW FORMATION TO 4597'. DRILL 4597-5685,5995, 6784, 7494, 7610, 8248, 8466, 8476, 8495, 8979, 9156, 9389, 9570, 9924, 10215, 10667, 11195, 11425, 12087, 12620, 12804, 13264, 13669, 13729, 14002. (***TD REACHED ON 05/01/2016)

05/03/2016: RUN 5 1/2", 20#, HCP-110 TXP BTC PRODUCTION CSG & SET @ 13,995'.
LC @ 13904. RSI TOOL @ 13843. MRKR JT @ 8429.
TEST 500PSIL/6500PSIH. CMT W/630 SX LEAD 1, 960 SX LEAD 2, & 109 SX TAIL CMT.BUMP PLUG @ 1575PSI.
LOST RETURNS 293 BBLS INTO DISPL. TOC @ 4076'.
RELEASE RIG.

Casing Summary

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Conductor, Planned?-N, 112ftKB

Set Depth (MD) (ftKB)	Set Tension (kips)	String Nominal OD (in)	String Min Drift (in)	Centralizers	Scratchers
112		20	18.187		

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Casing Joint	20	18.375	169.00	K-55		37	112	75.00	3,380.0	2,500.0

Surface, Planned?-N, 831ftKB

Set Depth (MD) (ftKB)	Set Tension (kips)	String Nominal OD (in)	String Min Drift (in)	Centralizers	Scratchers
831		13 3/8		9	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	FMC UH-2 Wellhead	24	12.615	54.50	J-55	ST&C	34	37	2.88		1,130.0
1	Casing Pup Joint	13 3/8	12.615	54.50	J-55	ST&C	37	41	3.93		1,130.0
18	Casing Joint	13 3/8	12.615	54.50	J-55	ST&C	41	790	748.91		1,130.0
1	Float Collar	13 3/8	12.615	54.50	J-55	ST&C	790	791	1.50		1,130.0
1	Casing Joint	13 3/8	12.615	54.50	J-55	ST&C	791	829	37.83		1,130.0
1	Shoe	13 3/8	12.615	54.50	J-55	ST&C	829	831	1.80		1,130.0

Intermediate Casing 1, Planned?-N, 4,577ftKB

Set Depth (MD) (ftKB)	Set Tension (kips)	String Nominal OD (in)	String Min Drift (in)	Centralizers	Scratchers
4,577		9 5/8		29	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Hanger	9 5/8	8.835	40.00	HCK-55	LT&C	37	37	0.63		2,570.0
1	Pup Jt	9 5/8	8.835	40.00	HCK-55	LT&C	37	40	3.28		2,570.0
107	Casing Joint	9 5/8	8.835	40.00	HCK-55	LT&C	40	4,493	4,452.18		2,570.0
1	Float Collar	9 5/8	8.835	40.00	HCK-55	LT&C	4,493	4,494	1.49		2,570.0
2	Casing Joint	9 5/8	8.835	40.00	HCK-55	LT&C	4,494	4,575	81.29		2,570.0
1	Float Shoe	9 5/8	8.835	40.00	HCK-55	LT&C	4,575	4,577	1.60		

Production Casing, Planned?-N, 13,995ftKB

Set Depth (MD) (ftKB)	Set Tension (kips)	String Nominal OD (in)	String Min Drift (in)	Centralizers	Scratchers
13,995		5 1/2		71	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collapse (psi)
1	Casing Hanger	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	37	38	1.17		11,100.0
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	38	42	4.26		11,100.0
203	Casing Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	42	8,424	8,382.00		11,100.0
1	Marker Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	8,424	8,429	4.75		
131	Casing Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	8,429	13,826	5,397.66		11,100.0
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,826	13,837	10.25		
1	RSI	5 1/2	4.778	20.00		TXP BTC-S	13,837	13,843	6.67		
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,843	13,854	10.13		
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,854	13,895	41.21		11,100.0
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,895	13,905	9.87		
1	Landing Collar	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,905	13,906	1.48		
1	XRV Tool	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,906	13,908	2.20		
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,908	13,951	42.65		11,100.0
1	Float Collar	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,951	13,953	2.41		
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,953	13,992	38.95		11,100.0
1	Float Shoe	5 1/2	4.778	20.00	P-110IC	TXP BTC-S	13,992	13,995	2.69		

Report Printed: 10/4/2016

Cement Summary

Surface Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Original Hole

Wellbore Name	Directional Type	Min Kick Off Depth (ftKB)	Vertical Section Direction (°)
Original Hole	Horizontal	8,510.0	176.66

Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)
17 1/2	32.6	841.0
12 1/4	841.0	4,587.0
8 3/4	4,587.0	14,002.0

Multi-bowl, FMC on 4/20/2016 17:00

Sub Type	Install Date
Multi-bowl	4/20/2016

Des	Make	Model	WP (psi)	Service	SN

Conductor, Planned?-N, 112ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Conductor	Original Hole	4/1/2016	112	-37.0	

Centralizers	Scratchers

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	20	18.375	169.00	K-55			75.00	37	112

Surface, Planned?-N, 831ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Surface	Original Hole	4/20/2016	831	-34.2	

Centralizers	Scratchers
9	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	FMC UH-2 Wellhead	24	12.615	54.50	J-55		ST&C	2.88	34	37
1	Casing Pup Joint	13 3/8	12.615	54.50	J-55		ST&C	3.93	37	41
18	Casing Joint	13 3/8	12.615	54.50	J-55		ST&C	748.91	41	790
1	Float Collar	13 3/8	12.615	54.50	J-55		ST&C	1.50	790	791
1	Casing Joint	13 3/8	12.615	54.50	J-55		ST&C	37.83	791	829
1	Shoe	13 3/8	12.615	54.50	J-55		ST&C	1.80	829	831

Intermediate Casing 1, Planned?-N, 4,577ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Intermediate Casing 1	Original Hole	4/24/2016	4,577	-36.5	

Centralizers	Scratchers
29	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Hanger	9 5/8	8.835	40.00	HCK-55		LT&C	0.63	37	37
1	Pup Jt	9 5/8	8.835	40.00	HCK-55		LT&C	3.28	37	40
107	Casing Joint	9 5/8	8.835	40.00	HCK-55		LT&C	4,452.18	40	4,493
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LT&C	1.49	4,493	4,494
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LT&C	81.29	4,494	4,575
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LT&C	1.60	4,575	4,577

Production Casing, Planned?-N, 13,995ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Production Casing	Original Hole	5/3/2016	13,995	-36.7	

Centralizers	Scratchers
71	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Hanger	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	1.17	37	38
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	4.26	38	42
203	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	8,382.00	42	8,424
1	Marker Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	4.75	8,424	8,429
131	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	5,397.66	8,429	13,826
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	10.25	13,826	13,837
1	RSI	5 1/2	4.778	20.00		5 1/2	TXP BTC -S	6.67	13,837	13,843

Report Printed: 10/4/2016

Cement Summary

Surface Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	10.13	13,843	13,854
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	41.21	13,854	13,895
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	9.87	13,895	13,905
1	Landing Collar	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	1.48	13,905	13,906
1	XRV Tool	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.20	13,906	13,908
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	42.65	13,908	13,951
1	Float Collar	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.41	13,951	13,953
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	38.95	13,953	13,992
1	Float Shoe	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.69	13,992	13,995

Surface Casing Cement, Casing, 4/20/2016 13:30

Cementing Start Date	Cementing End Date	Wellbore
4/20/2016	4/20/2016	Original Hole

Evaluation Method	Cement Evaluation Results
Returns to Surface	102 bbls cmt to surface

Comment

Performed cement job as follows:
Pressure tested lines to 3400 psi.
Pump 40 bbls of Spacer at 8.3 ppg.
Mix and pump 960 sxs (227 bbls) of Cement at 14.8 ppg.
Drop plug and displace cement with 122 bbls of 8.3 ppg Fresh Water.
Bumped plug with 515 psi over final circulating pressure.
Bled pressure off - floats held.

Details:
Full returns throughout job.
Final circulating pressure prior to bumping plug 340 psi at 2.1 bpm.
102 bbls of cement to surface.
Cement in place @ 15:18

1, 37.0-841.0ftKB

Top Depth (ftKB)	Bottom Depth (ftKB)	Full Return?	Vol Cement Ret (bbl)	Top Plug?	Bottom Plug?
37.0	841.0	Y	102.0	Y	N

Initial Pump Rate (bbl/min)	Final Pump Rate (bbl/min)	Avg Pump Rate (bbl/min)	Final Pump Pressure (psi)	Plug Bump Pressure (psi)
5.4	2.5	5.4	340.0	845.0

Pipe Reciprocated?	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)	Pipe Rotated?	Pipe RPM (rpm)
N			N	

Depth Tagged (MD) (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)	Drill Out Diameter (in)	Drill Out Date

Spacer

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Spacer				40.0

Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)

Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
	8.33			

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Tail		960	C	227.0

Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)
32.6	832.0	125.0	1.33	6.37

Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
	14.80			

Cement Fluid Additives

Add	Type	Conc

Cement Summary

Surface Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Displacement

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Displacement				120.0
Estimated Top (ftKB)	**Estimated Bottom Depth (ftKB)**	**Percent Excess Pumped (%)**	**Yield (ft³/sack)**	**Fluid Mix Ratio (gal/sack)**
Free Water (%)	**Density (lb/gal)**	**Zero Gel Time (min)**	**Thickening Time (hr)**	**1st Compressive Strength (psi)**
	8.33			

Cement Fluid Additives

Add	Type	Conc

Report Printed: 10/4/2016

Cement Summary

Intermediate Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Original Hole

Wellbore Name	Directional Type	Min Kick Off Depth (ftKB)	Vertical Section Direction (°)
Original Hole	Horizontal	8,510.0	176.66

Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)
17 1/2	32.6	841.0
12 1/4	841.0	4,587.0
8 3/4	4,587.0	14,002.0

Multi-bowl, FMC on 4/20/2016 17:00

Sub-Type	Install Date
Multi-bowl	4/20/2016

Des	Make	Model	WP (psi)	Service	SN

Conductor, Planned?-N, 112ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Conductor	Original Hole	4/1/2016	112	-37.0	

Centralizers	Scratchers

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	20	18.375	169.00	K-55			75.00	37	112

Surface, Planned?-N, 831ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Surface	Original Hole	4/20/2016	831	-34.2	

Centralizers	Scratchers
9	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	FMC UH-2 Wellhead	24	12.615	54.50	J-55		ST&C	2.88	34	37
1	Casing Pup Joint	13 3/8	12.615	54.50	J-55		ST&C	3.93	37	41
18	Casing Joint	13 3/8	12.615	54.50	J-55		ST&C	748.91	41	790
1	Float Collar	13 3/8	12.615	54.50	J-55		ST&C	1.50	790	791
1	Casing Joint	13 3/8	12.615	54.50	J-55		ST&C	37.83	791	829
1	Shoe	13 3/8	12.615	54.50	J-55		ST&C	1.80	829	831

Intermediate Casing 1, Planned?-N, 4,577ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Intermediate Casing 1	Original Hole	4/24/2016	4,577	-36.5	

Centralizers	Scratchers
29	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Hanger	9 5/8	8.835	40.00	HCK-55		LT&C	0.63	37	37
1	Pup Jt	9 5/8	8.835	40.00	HCK-55		LT&C	3.28	37	40
107	Casing Joint	9 5/8	8.835	40.00	HCK-55		LT&C	4,452.18	40	4,493
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LT&C	1.49	4,493	4,494
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LT&C	81.29	4,494	4,575
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LT&C	1.60	4,575	4,577

Production Casing, Planned?-N, 13,995ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Production Casing	Original Hole	5/3/2016	13,995	-36.7	

Centralizers	Scratchers
71	

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Hanger	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	1.17	37	38
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	4.26	38	42
203	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	8,382.00	42	8,424
1	Marker Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	4.75	8,424	8,429
131	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	5,397.66	8,429	13,826
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	10.25	13,826	13,837
1	RSI	5 1/2	4.778	20.00		5 1/2	TXP BTC -S	6.67	13,837	13,843

Report Printed: 10/4/2016

Cement Summary

Intermediate Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	10.13	13,843	13,854
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	41.21	13,854	13,895
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	9.87	13,895	13,905
1	Landing Collar	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	1.48	13,905	13,906
1	XRV Tool	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.20	13,906	13,908
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	42.65	13,908	13,951
1	Float Collar	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.41	13,951	13,953
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	38.95	13,953	13,992
1	Float Shoe	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.69	13,992	13,995

Intermediate Casing Cement, Casing, 4/24/2016 09:00

Cementing Start Date	Cementing End Date	Wellbore
4/24/2016	4/24/2016	Original Hole

Evaluation Method	Cement Evaluation Results
Returns to Surface	160 bbls cmt to surface

Comment

1, 37.0-4,587.0ftKB

Top Depth (ftKB)	Bottom Depth (ftKB)	Full Return?	Vol Cement Ret (bbl)	Top Plug?	Bottom Plug?
37.0	4,587.0	Y	160.0	Y	N

Initial Pump Rate (bbl/min)	Final Pump Rate (bbl/min)	Avg Pump Rate (bbl/min)	Final Pump Pressure (psi)	Plug Bump Pressure (psi)
3.3	2.2	5.1	1,200.0	1,700.0

Pipe Reciprocated?	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)	Pipe Rotated?	Pipe RPM (rpm)
N			N	

Depth Tagged (MD) (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)	Drill Out Diameter (in)	Drill Out Date

Spacer

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Spacer	Dyed Spacer			40.0

Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)
32.6	32.6			

Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
	8.30			

Cement Fluid Additives

Add	Type	Conc

Lead

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Lead	50:50 POZ/C	1,055	C	456.0

Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)
32.6	3,587.0	150.0	2.43	13.77

Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
	11.90			

Cement Fluid Additives

Add	Type	Conc

Tail

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Tail	C-Neat	462	C	109.0

Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)
3,587.0	4,587.0	85.0	1.33	6.35

Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
	14.80			

Cement Fluid Additives

Add	Type	Conc

Cement Summary

Intermediate Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Displacement

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Displacement	Displacement			340.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)
Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
	8.30			

Cement Fluid Additives

Add	Type	Conc

Report Printed: 10/4/2016

Cement Summary

Production Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Original Hole

Wellbore Name	Directional Type	Min Kick Off Depth (ftKB)	Vertical Section Direction (°)
Original Hole	Horizontal	8,510.0	176.66

Hole Size (in)	Act Top (ftKB)	Act Btm (ftKB)
17 1/2	32.6	841.0
12 1/4	841.0	4,587.0
8 3/4	4,587.0	14,002.0

Multi-bowl, FMC on 4/20/2016 17:00

Sub-Type	Install Date
Multi-bowl	4/20/2016

Des	Make	Model	WP (psi)	Service	SN

Conductor, Planned?-N, 112ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Conductor	Original Hole	4/1/2016	112	-37.0	

Centralizers:

Scratchers:

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Joint	20	18.375	169.00	K-55			75.00	37	112

Surface, Planned?-N, 831ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Surface	Original Hole	4/20/2016	831	-34.2	

Centralizers: 9

Scratchers:

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	FMC UH-2 Wellhead	24	12.615	54.50	J-55		ST&C	2.88	34	37
1	Casing Pup Joint	13 3/8	12.615	54.50	J-55		ST&C	3.93	37	41
18	Casing Joint	13 3/8	12.615	54.50	J-55		ST&C	748.91	41	790
1	Float Collar	13 3/8	12.615	54.50	J-55		ST&C	1.50	790	791
1	Casing Joint	13 3/8	12.615	54.50	J-55		ST&C	37.83	791	829
1	Shoe	13 3/8	12.615	54.50	J-55		ST&C	1.80	829	831

Intermediate Casing 1, Planned?-N, 4,577ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Intermediate Casing 1	Original Hole	4/24/2016	4,577	-36.5	

Centralizers: 29

Scratchers:

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Hanger	9 5/8	8.835	40.00	HCK-55		LT&C	0.63	37	37
1	Pup Jt	9 5/8	8.835	40.00	HCK-55		LT&C	3.28	37	40
107	Casing Joint	9 5/8	8.835	40.00	HCK-55		LT&C	4,452.18	40	4,493
1	Float Collar	9 5/8	8.835	40.00	HCK-55		LT&C	1.49	4,493	4,494
2	Casing Joint	9 5/8	8.835	40.00	HCK-55		LT&C	81.29	4,494	4,575
1	Float Shoe	9 5/8	8.835	40.00	HCK-55		LT&C	1.60	4,575	4,577

Production Casing, Planned?-N, 13,995ftKB

Casing Description	Wellbore	Run Date	Set Depth (MD) (ftKB)	Stick Up (ftKB)	Set Tension (kips)
Production Casing	Original Hole	5/3/2016	13,995	-36.7	

Centralizers: 71

Scratchers:

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Hanger	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	1.17	37	38
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	4.26	38	42
203	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	8,382.00	42	8,424
1	Marker Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	4.75	8,424	8,429
131	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	5,397.66	8,429	13,826
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	10.25	13,826	13,837
1	RSI	5 1/2	4.778	20.00		5 1/2	TXP BTC -S	6.67	13,837	13,843

Report Printed: 10/4/2016

Cement Summary

Production Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Conn Sz (in)	Top Thread	Len (ft)	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	10.13	13,843	13,854
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	41.21	13,854	13,895
1	Casing Pup Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	9.87	13,895	13,905
1	Landing Collar	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	1.48	13,905	13,906
1	XRV Tool	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.20	13,906	13,908
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	42.65	13,908	13,951
1	Float Collar	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.41	13,951	13,953
1	Casing Joint	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	38.95	13,953	13,992
1	Float Shoe	5 1/2	4.778	20.00	P-110IC	5 1/2	TXP BTC -S	2.69	13,992	13,995

Production Casing Cement, Casing, 5/3/2016 07:45

Cementing Start Date	Cementing End Date	Wellbore
5/3/2016	5/3/2016	Original Hole

Evaluation Method	Cement Evaluation Results
Lift Pressure	FCP of 1,575 psi. Expected lift pressure of 1,572 psi.

Comment

Test surface lines to 6,500 psi. Pump: 30 bbl of 10.0 ppg mudpush 301 bbl (630 sxs) of 11.5 ppg lead 1 cement slurry 250 bbl (960 sxs) of 12.5 ppg lead 2 cement slurry 47 bbl (109 sxs) of 15.0 ppg tail cement slurry 308 bbl of Displacement (8.3 FW) Held 500 psi over for 5 min. Bled back 2.5 bbls; floats held. FCP 1,575 psi @ 3.5 bpm.

1, 3,850.0-13,991.0ftKB

Top Depth (ftKB)	Bottom Depth (ftKB)	Full Return?	Vol Cement Ret (bbl)	Top Plug?	Bottom Plug?
3,850.0	13,991.0	N	0.0	Y	Y

Initial Pump Rate (bbl/min)	Final Pump Rate (bbl/min)	Avg Pump Rate (bbl/min)	Final Pump Pressure (psi)	Plug Bump Pressure (psi)
4.4	3.5	4	1,575.0	2,200.0

Pipe Reciprocated?	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)	Pipe Rotated?	Pipe RPM (rpm)
N			N	

Depth Tagged (MD) (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)	Drill Out Diameter (in)	Drill Out Date

Spacer

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Spacer				30.0

Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)

Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
	10.00			

Cement Fluid Additives

Add	Type	Conc

Lead

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Lead		630		301.0

Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)
3,850.0	8,545.0	35.0	2.69	15.76

Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
0.00	11.50			50.0

Cement Fluid Additives

Add	Type	Conc

Lead

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Lead		960		250.0

Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Fluid Mix Ratio (gal/sack)
8,545.0	13,100.0	50.0	1.62	8.62

Free Water (%)	Density (lb/gal)	Zero Gel Time (min)	Thickening Time (hr)	1st Compressive Strength (psi)
0.00	12.50			50.0

Cement Fluid Additives

Add	Type	Conc

Cement Summary

Production Casing Cement

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Tail

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Tail		109		47.0
Estimated Top (ftKB)	**Estimated Bottom Depth (ftKB)**	**Percent Excess Pumped (%)**	**Yield (ft³/sack)**	**Fluid Mix Ratio (gal/sack)**
13,100.0	14,002.0		2.18	9.55
Free Water (%)	**Density (lb/gal)**	**Zero Gel Time (min)**	**Thickening Time (hr)**	**1st Compressive Strength (psi)**
0.00	15.00			50.0

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type	Fluid Description	Quantity (sacks)	Class	Volume Pumped (bbl)
Displacement				308.0
Estimated Top (ftKB)	**Estimated Bottom Depth (ftKB)**	**Percent Excess Pumped (%)**	**Yield (ft³/sack)**	**Fluid Mix Ratio (gal/sack)**
Free Water (%)	**Density (lb/gal)**	**Zero Gel Time (min)**	**Thickening Time (hr)**	**1st Compressive Strength (psi)**
	8.30			

Cement Fluid Additives

Add	Type	Conc

Report Printed: 10/4/2016

Phoenix Technology Services
SURVEY DATA CERTIFICATION

PHOENIX TECHNOLOGY SERVICES

PHOENIX JOB NUMBER	60049	OPERATOR	Chevron
WELL NAME	SD WE 23 FED P7 4H	COUNTY & STATE	Lea County, NM
API WELL NUMBER	30-025-43089	PROPOSED DIRECTION	176.7

TIE-IN DATA

MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
816.00 ft	815.81 ft	2.7°	249.0°	7.88 S	9.61 W	Teledrift

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
22-Apr	949 ft	2.5°	233.8°

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
26-Apr-16	8,409 ft	2.1	202.6

TO THE BEST OF MY KNOWLEDGE I CERTIFY THIS SURVEY DATA TO BE TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
26-Apr-16	8,466 ft	2.1	202.6

Robert Brewer

PRINT YOUR NAME ABOVE

Robert Brewer

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.60
DECLINATION OR GRID	GRID

04/26/16

TODAY'S DATE

MWD SUPERVISOR 1	Robert Brewer	DIRECTIONAL DRILLER 1	Casey Tubbe
MWD SUPERVISOR 2	Lance Mosby	DIRECTIONAL DRILLER 2	Monte Gordon

12329 Cutten Rd., Houston, Texas 77066 (713)337-0600 (Voice), (713)337-0599 (Fax)

Chevron

Lea County, NM (NAD27 NME)
SD WE 23 Fed
P7 4H

OH / Job 60049

Survey: Phoenix MWD Surveys

Standard Survey Report

11 May, 2016

PHOENIX
TECHNOLOGY SERVICES

Phoenix Technology Services
Survey Report

Company:	Chevron	**Local Co-ordinate Reference:**	Well P7 4H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3198.00usft (Pace X30)
Site:	SD WE 23 Fed	**MD Reference:**	RKB @ 3198.00usft (Pace X30)
Well:	P7 4H	**North Reference:**	Grid
Wellbore:	OH / Job 60049	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Pace X30)	**Database:**	Compass 5000 GCR

Project Lea County, NM (NAD27 NME)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site SD WE 23 Fed

Site Position:		**Northing:**	377,312.00 usft	**Latitude:**	32° 2' 7.84590 N
From:	Map	**Easting:**	711,242.00 usft	**Longitude:**	103° 39' 5.90418 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.36 °

Well P7 4H

Well Position	**+N/-S**	0.00 usft	**Northing:**	377,549.00 usft	**Latitude:**	32° 2' 9.93548 N
	+E/-W	0.00 usft	**Easting:**	715,298.00 usft	**Longitude:**	103° 38' 18.76898 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,165.00 usft

Wellbore OH / Job 60049

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/18/2016	6.97	59.75	48,036

Design Surveys (Pace X30)

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	176.66

Survey Program **Date** 5/11/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
165.00	816.00	Teledrift MWD Surveys (OH / Job 60049)	MWD	MWD - Standard
949.00	8,409.00	Phoenix MWD Surveys (OH / Job 60049)	PHX+MWD+HDGM	PHX+OWSG MWD + HDGM
8,466.00	14,002.00	Baker Hughes MWD Surveys (OH / Job 60	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
816.00	2.70	249.00	815.81	-7.88	-9.61	7.31	0.00	0.00	0.00
Tie-In to Teledrift Surveys									
949.00	2.50	233.80	948.67	-10.72	-14.88	9.83	0.54	-0.15	-11.43
First Phoenix MWD Survey									
1,126.00	3.20	188.50	1,125.47	-17.88	-18.72	16.76	1.29	0.40	-25.59
1,303.00	5.00	141.80	1,302.06	-28.83	-14.68	27.93	2.06	1.02	-26.38
1,480.00	7.80	108.80	1,477.99	-38.77	1.47	38.79	2.55	1.58	-18.64
1,658.00	7.10	105.90	1,654.49	-45.68	23.48	46.97	0.45	-0.39	-1.63

Company:	Chevron	**Local Co-ordinate Reference:**	Well P7 4H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3198.00usft (Pace X30)
Site:	SD WE 23 Fed	**MD Reference:**	RKB @ 3198.00usft (Pace X30)
Well:	P7 4H	**North Reference:**	Grid
Wellbore:	OH / Job 60049	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Pace X30)	**Database:**	Compass 5000 GCR

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,835.00	7.10	105.40	1,830.13	-51.58	44.55	54.09	0.03	0.00	-0.28
2,014.00	6.50	106.20	2,007.87	-57.34	64.94	61.03	0.34	-0.34	0.45
2,192.00	6.20	109.00	2,184.78	-63.28	83.71	68.06	0.24	-0.17	1.57
2,369.00	6.60	110.90	2,360.68	-70.02	102.25	75.87	0.26	0.23	1.07
2,546.00	7.20	109.90	2,536.40	-77.43	122.18	84.42	0.35	0.34	-0.56
2,724.00	7.60	113.00	2,712.91	-85.82	143.50	94.05	0.32	0.22	1.74
2,901.00	6.70	112.40	2,888.54	-94.33	163.82	103.73	0.51	-0.51	-0.34
3,079.00	6.20	111.90	3,065.41	-101.87	182.34	112.34	0.28	-0.28	-0.28
3,256.00	6.80	110.10	3,241.27	-109.04	201.05	120.58	0.36	0.34	-1.02
3,434.00	7.90	108.20	3,417.81	-116.48	222.57	129.27	0.63	0.62	-1.07
3,611.00	6.80	111.70	3,593.35	-124.16	243.86	138.17	0.67	-0.62	1.98
3,789.00	6.40	113.80	3,770.17	-132.06	262.73	147.16	0.26	-0.22	1.18
3,967.00	6.40	113.40	3,947.06	-140.00	280.91	156.15	0.03	0.00	-0.22
4,144.00	3.40	121.30	4,123.40	-146.65	294.45	163.57	1.73	-1.69	4.46
4,322.00	1.90	119.10	4,301.20	-150.82	301.54	168.15	0.84	-0.84	-1.24
4,499.00	0.90	124.60	4,478.14	-153.04	305.25	170.58	0.57	-0.56	3.11
4,529.00	0.70	124.50	4,508.14	-153.28	305.60	170.84	0.67	-0.67	-0.33
4,688.00	0.70	132.90	4,667.13	-154.49	307.11	172.14	0.06	0.00	5.28
4,865.00	1.50	220.10	4,844.11	-157.00	306.41	174.60	0.92	0.45	49.27
5,043.00	1.60	280.60	5,022.05	-158.32	302.46	175.69	0.88	0.06	33.99
5,220.00	1.60	274.90	5,198.98	-157.66	297.57	174.74	0.09	0.00	-3.22
5,397.00	1.90	271.10	5,375.90	-157.39	292.18	174.16	0.18	0.17	-2.15
5,575.00	1.90	270.60	5,553.80	-157.30	286.28	173.73	0.01	0.00	-0.28
5,751.00	0.80	234.50	5,729.75	-157.99	282.36	174.18	0.76	-0.63	-20.51
5,928.00	0.70	328.60	5,906.74	-157.78	280.79	173.89	0.62	-0.06	53.16
6,105.00	1.00	350.30	6,083.72	-155.33	279.96	171.40	0.25	0.17	12.26
6,283.00	1.00	347.30	6,261.70	-152.29	279.36	168.32	0.03	0.00	-1.69
6,461.00	0.70	340.20	6,439.68	-149.75	278.65	165.75	0.18	-0.17	-3.99
6,638.00	0.80	313.30	6,616.66	-147.89	277.39	163.81	0.20	0.06	-15.20
6,816.00	0.50	98.50	6,794.66	-147.15	277.25	163.07	0.70	-0.17	81.57
6,993.00	0.20	102.00	6,971.65	-147.33	278.32	163.31	0.17	-0.17	1.98
7,171.00	0.30	160.30	7,149.65	-147.83	278.78	163.84	0.15	0.06	32.75
7,348.00	0.30	157.30	7,326.65	-148.69	279.11	164.72	0.01	0.00	-1.69
7,526.00	0.70	202.20	7,504.64	-150.13	278.88	166.14	0.30	0.22	25.22
7,703.00	0.90	197.90	7,681.63	-152.45	278.05	168.41	0.12	0.11	-2.43
7,881.00	1.40	188.80	7,859.59	-155.93	277.28	171.84	0.30	0.28	-5.11
8,058.00	2.00	191.40	8,036.51	-161.10	276.34	176.94	0.34	0.34	1.47
8,235.00	2.30	188.50	8,213.39	-167.64	275.21	183.40	0.18	0.17	-1.64
8,409.00	2.10	202.60	8,387.26	-174.03	273.47	189.69	0.33	-0.11	8.10
Final Phoenix MWD Survey									
8,466.00	2.10	202.60	8,444.22	-175.96	272.66	191.56	0.00	0.00	0.00
Projection to TD									

Company:	Chevron	**Local Co-ordinate Reference:**	Well P7 4H
Project:	Lea County, NM (NAD27 NME)	**TVD Reference:**	RKB @ 3198.00usft (Pace X30)
Site:	SD WE 23 Fed	**MD Reference:**	RKB @ 3198.00usft (Pace X30)
Well:	P7 4H	**North Reference:**	Grid
Wellbore:	OH / Job 60049	**Survey Calculation Method:**	Minimum Curvature
Design:	Surveys (Pace X30)	**Database:**	Compass 5000 GCR

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
816.00	815.81	-7.89	-9.60	Tie-in to Teledrift Surveys
949.00	948.67	-10.73	-14.87	First Phoenix MWD Survey
8,409.00	8,387.26	-174.05	273.47	Final Phoenix MWD Survey
8,466.00	8,444.22	-175.97	272.67	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

Directional Survey

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Wellbore Name	Parent Wellbore	Min Kick Off Depth (ftKB)	Vertical Section Direction (°)
Original Hole	Original Hole	8,510.0	176.66

Northing (Y) (ft)	Easting (X) (ft)	UTM Grid Zone

Date	Definitive?	Description	Planned?
4/20/2016	Y	MWD	N

MD Tie In (ftKB)	TVDTie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NSTie In (ft)	EWTie In (ft)

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unused data
165	0.40	176.00	165.00	-0.57	0.04	0.58	0.24	Magn MWD	Rig	0.24	0.58	106.67	N
255	0.50	173.00	255.00	-1.28	0.11	1.28	0.11	Magn MWD	Rig	0.11	1.28	-3.33	N
346	1.00	214.00	345.99	-2.33	-0.29	2.31	0.77	Magn MWD	Rig	0.55	2.35	45.05	N
436	0.70	192.00	435.98	-3.52	-0.84	3.46	0.49	Magn MWD	Rig	-0.33	3.62	-24.44	N
532	0.80	208.00	531.97	-4.68	-1.28	4.60	0.24	Magn MWD	Rig	0.10	4.85	16.67	N
625	1.30	254.00	624.96	-5.55	-2.59	5.39	1.01	Magn MWD	Rig	0.54	6.13	49.46	N
717	2.40	252.00	716.91	-6.43	-5.43	6.10	1.20	Magn MWD	Rig	1.20	8.42	-2.17	N
816	2.70	249.00	815.81	-7.91	-9.58	7.34	0.33	Magn MWD	Rig	0.30	12.42	-3.03	N
949	2.50	233.80	948.67	-10.74	-14.84	9.86	0.54	Magn MWD	Phoenix Directional	-0.15	18.32	-11.43	N
1,126	3.20	188.50	1,125.47	-17.91	-18.69	16.79	1.29	Magn MWD	Phoenix Directional	0.40	25.89	-25.59	N
1,303	5.00	141.80	1,302.06	-28.86	-14.65	27.96	2.06	Magn MWD	Phoenix Directional	1.02	32.37	-26.38	N
1,480	7.80	108.80	1,477.99	-38.80	1.50	38.82	2.55	Magn MWD	Phoenix Directional	1.58	38.83	-18.64	N
1,658	7.10	105.90	1,654.49	-45.71	23.51	47.00	0.45	Magn MWD	Phoenix Directional	-0.39	51.40	-1.63	N
1,835	7.10	105.40	1,830.13	-51.61	44.58	54.12	0.03	Magn MWD	Phoenix Directional	0.00	68.20	-0.28	N
2,014	6.50	106.20	2,007.87	-57.37	64.98	61.06	0.34	Magn MWD	Phoenix Directional	-0.34	86.68	0.45	N
2,192	6.20	109.00	2,184.78	-63.31	83.74	68.08	0.24	Magn MWD	Phoenix Directional	-0.17	104.98	1.57	N
2,369	6.60	110.90	2,360.68	-70.05	102.28	75.89	0.26	Magn MWD	Phoenix Directional	0.23	123.97	1.07	N
2,546	7.20	109.90	2,536.40	-77.46	122.21	84.44	0.35	Magn MWD	Phoenix Directional	0.34	144.69	-0.56	N
2,724	7.60	113.00	2,712.91	-85.85	143.54	94.07	0.32	Magn MWD	Phoenix Directional	0.22	167.25	1.74	N
2,901	6.70	112.40	2,888.54	-94.36	163.86	103.75	0.51	Magn MWD	Phoenix Directional	-0.51	189.08	-0.34	N
3,079	6.20	111.90	3,065.41	-101.90	182.37	112.35	0.28	Magn MWD	Phoenix Directional	-0.28	208.91	-0.28	N
3,256	6.80	110.10	3,241.27	-109.07	201.08	120.60	0.36	Magn MWD	Phoenix Directional	0.34	228.76	-1.02	N
3,434	7.90	108.20	3,417.81	-116.51	222.60	129.28	0.63	Magn MWD	Phoenix Directional	0.62	251.25	-1.07	N
3,611	6.80	111.70	3,593.35	-124.19	243.89	138.18	0.67	Magn MWD	Phoenix Directional	-0.62	273.69	1.98	N
3,789	6.40	113.80	3,770.17	-132.08	262.76	147.17	0.26	Magn MWD	Phoenix Directional	-0.22	294.09	1.18	N
3,967	6.40	113.40	3,947.06	-140.03	280.94	156.16	0.03	Magn MWD	Phoenix Directional	0.00	313.91	-0.22	N
4,144	3.40	121.30	4,123.40	-146.67	294.49	163.58	1.73	Magn MWD	Phoenix Directional	-1.69	328.99	4.46	N

Report Printed: 10/4/2016

Directional Survey

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unused data
4,322	1.90	119.10	4,301.20	-150.85	301.57	168.17	0.84	Magn MWD	Phoenix Directional	-0.84	337.20	-1.24	N
4,499	0.90	124.60	4,478.14	-153.07	305.28	170.59	0.57	Magn MWD	Phoenix Directional	-0.56	341.51	3.11	N
4,529	0.70	124.50	4,508.14	-153.31	305.63	170.85	0.67	Magn MWD	Phoenix Directional	-0.67	341.92	-0.33	N
4,688	0.70	132.90	4,667.13	-154.52	307.14	172.15	0.06	Magn MWD	Phoenix Directional	0.00	343.82	5.28	N
4,865	1.50	220.10	4,844.10	-157.03	306.44	174.61	0.92	Magn MWD	Phoenix Directional	0.45	344.33	49.27	N
5,043	1.60	280.60	5,022.05	-158.35	302.50	175.71	0.88	Magn MWD	Phoenix Directional	0.06	341.44	33.99	N
5,220	1.60	274.90	5,198.98	-157.68	297.60	174.76	0.09	Magn MWD	Phoenix Directional	0.00	336.80	-3.22	N
5,397	1.90	271.10	5,375.90	-157.42	292.21	174.17	0.18	Magn MWD	Phoenix Directional	0.17	331.91	-2.15	N
5,575	1.90	270.60	5,553.80	-157.33	286.31	173.74	0.01	Magn MWD	Phoenix Directional	0.00	326.69	-0.28	N
5,751	0.80	234.50	5,729.75	-158.01	282.39	174.20	0.76	Magn MWD	Phoenix Directional	-0.63	323.59	-20.51	N
5,928	0.70	328.60	5,906.74	-157.81	280.82	173.90	0.62	Magn MWD	Phoenix Directional	-0.06	322.12	53.16	N
6,105	1.00	350.30	6,083.72	-155.36	280.00	171.41	0.25	Magn MWD	Phoenix Directional	0.17	320.21	12.26	N
6,283	1.00	347.30	6,261.70	-152.32	279.39	168.34	0.03	Magn MWD	Phoenix Directional	0.00	318.22	-1.69	N
6,461	0.70	340.20	6,439.68	-149.78	278.68	165.76	0.18	Magn MWD	Phoenix Directional	-0.17	316.38	-3.99	N
6,638	0.80	313.30	6,616.66	-147.91	277.42	163.82	0.20	Magn MWD	Phoenix Directional	0.06	314.39	-15.20	N
6,816	0.50	98.50	6,794.66	-147.18	277.28	163.08	0.70	Magn MWD	Phoenix Directional	-0.17	313.92	-120.67	N
6,993	0.20	102.00	6,971.65	-147.35	278.35	163.32	0.17	Magn MWD	Phoenix Directional	-0.17	314.95	1.98	N
7,171	0.30	160.30	7,149.65	-147.86	278.81	163.85	0.15	Magn MWD	Phoenix Directional	0.06	315.59	32.75	N
7,348	0.30	157.30	7,326.65	-148.72	279.14	164.73	0.01	Magn MWD	Phoenix Directional	0.00	316.29	-1.69	N
7,526	0.70	202.20	7,504.64	-150.16	278.91	166.15	0.30	Magn MWD	Phoenix Directional	0.22	316.76	25.22	N
7,703	0.90	197.90	7,681.63	-152.48	278.08	168.42	0.12	Magn MWD	Phoenix Directional	0.11	317.14	-2.43	N
7,881	1.40	188.80	7,859.59	-155.96	277.31	171.85	0.30	Magn MWD	Phoenix Directional	0.28	318.16	-5.11	N
8,058	2.00	191.40	8,036.51	-161.13	276.37	176.95	0.34	Magn MWD	Phoenix Directional	0.34	319.91	1.47	N
8,235	2.30	188.50	8,213.39	-167.67	275.24	183.42	0.18	Magn MWD	Phoenix Directional	0.17	322.29	-1.64	N
8,409	2.10	202.60	8,387.26	-174.06	273.50	189.70	0.33	Magn MWD	Phoenix Directional	-0.11	324.19	8.10	N
8,466	2.29	199.61	8,444.22	-176.10	272.71	191.69	0.39	Magn MWD	Baker Hughes	0.33	324.63	-5.25	N
8,510	3.81	195.55	8,488.15	-178.34	272.03	193.88	3.49	Magn MWD	Baker Hughes	3.45	325.27	-9.23	N
8,555	10.64	182.64	8,532.77	-183.93	271.43	199.43	15.51	Magn MWD	Baker Hughes	15.18	327.88	-28.69	N
8,599	17.29	178.43	8,575.45	-194.54	271.43	210.02	15.28	Magn MWD	Baker Hughes	15.11	333.94	-9.57	N
8,644	24.12	176.80	8,617.52	-210.42	272.12	225.92	15.23	Magn MWD	Baker Hughes	15.18	343.99	-3.62	N

Report Printed: 10/4/2016

Directional Survey

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unused data
8,688	27.65	173.93	8,657.10	-229.56	273.70	245.11	8.51	Magn MWD	Baker Hughes	8.02	357.23	-6.52	N
8,732	31.62	173.56	8,695.34	-251.18	276.08	266.84	9.03	Magn MWD	Baker Hughes	9.02	373.24	-0.84	N
8,777	36.99	172.84	8,732.49	-276.35	279.09	292.14	11.97	Magn MWD	Baker Hughes	11.93	392.76	-1.60	N
8,821	40.31	173.83	8,766.85	-303.64	282.27	319.57	7.67	Magn MWD	Baker Hughes	7.55	414.58	2.25	N
8,909	46.56	175.05	8,830.72	-363.83	288.09	380.00	7.17	Magn MWD	Baker Hughes	7.10	464.08	1.39	N
8,954	47.44	175.94	8,861.41	-396.64	290.68	412.90	2.43	Magn MWD	Baker Hughes	1.96	491.75	1.98	N
8,998	49.55	175.97	8,890.57	-429.51	293.00	445.85	4.80	Magn MWD	Baker Hughes	4.80	519.93	0.07	N
9,043	52.07	175.72	8,919.00	-464.29	295.53	480.72	5.62	Magn MWD	Baker Hughes	5.60	550.37	-0.56	N
9,087	56.56	176.31	8,944.66	-499.94	298.01	516.45	10.26	Magn MWD	Baker Hughes	10.20	582.02	1.34	N
9,131	61.56	178.29	8,967.28	-537.62	299.77	554.17	12.00	Magn MWD	Baker Hughes	11.36	615.54	4.50	N
9,176	67.01	177.38	8,986.80	-578.12	301.31	594.69	12.25	Magn MWD	Baker Hughes	12.11	651.92	-2.02	N
9,220	72.84	177.77	9,001.89	-619.39	303.05	635.99	13.28	Magn MWD	Baker Hughes	13.25	689.55	0.89	N
9,264	78.47	179.83	9,012.79	-661.99	303.93	678.57	13.57	Magn MWD	Baker Hughes	12.80	728.43	4.68	N
9,309	84.01	180.13	9,019.64	-706.45	303.95	722.95	12.33	Magn MWD	Baker Hughes	12.31	769.06	0.67	N
9,353	88.74	181.71	9,022.42	-750.34	303.24	766.73	11.33	Magn MWD	Baker Hughes	10.75	809.30	3.59	N
9,397	89.51	180.45	9,023.10	-794.32	302.41	810.59	3.36	Magn MWD	Baker Hughes	1.75	849.94	-2.86	N
9,486	89.29	183.26	9,024.03	-883.26	299.53	899.21	3.17	Magn MWD	Baker Hughes	-0.25	932.67	3.16	N
9,575	91.20	185.90	9,023.65	-971.97	292.43	987.35	3.66	Magn MWD	Baker Hughes	2.15	1,015.00	2.97	N
9,660.05	90.77	183.32	9,022.19	-1,056.72	285.59	1,071.57	3.07	Magn MWD	Baker Hughes	-0.51	1,094.63	-3.03	N
9,752	87.26	177.80	9,023.77	-1,148.60	284.69	1,163.24	7.11	Magn MWD	Baker Hughes	-3.82	1,183.36	-6.00	N
9,841	87.84	174.35	9,027.57	-1,237.30	290.78	1,252.14	3.93	Magn MWD	Baker Hughes	0.65	1,271.01	-3.88	N
9,932	87.54	176.55	9,031.24	-1,327.93	297.99	1,343.04	2.44	Magn MWD	Baker Hughes	-0.33	1,360.96	2.42	N
10,021	89.38	178.33	9,033.63	-1,416.81	301.96	1,431.99	2.88	Magn MWD	Baker Hughes	2.07	1,448.63	2.00	N
10,110	90.00	178.23	9,034.11	-1,505.76	304.64	1,520.95	0.71	Magn MWD	Baker Hughes	0.70	1,536.27	-0.11	N
10,198	89.75	178.37	9,034.31	-1,593.72	307.25	1,608.92	0.33	Magn MWD	Baker Hughes	-0.28	1,623.07	0.16	N
10,287	89.94	179.06	9,034.55	-1,682.70	309.24	1,697.86	0.80	Magn MWD	Baker Hughes	0.21	1,710.88	0.78	N
10,376	89.97	180.25	9,034.62	-1,771.70	309.78	1,786.74	1.34	Magn MWD	Baker Hughes	0.03	1,798.58	1.34	N
10,464	89.85	180.30	9,034.76	-1,859.70	309.36	1,874.56	0.15	Magn MWD	Baker Hughes	-0.14	1,885.25	0.06	N
10,553	89.78	179.54	9,035.04	-1,948.70	309.48	1,963.42	0.86	Magn MWD	Baker Hughes	-0.08	1,973.12	-0.85	N
10,642	90.00	181.00	9,035.21	-2,037.69	309.06	2,052.24	1.66	Magn MWD	Baker Hughes	0.25	2,061.00	1.64	N

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Directional Survey

Well Name	Lease	Field Name	Business Unit
SALADO DRAW WE 23 FED P7 004H	SD 23 FED P7	JENNINGS	Mid-Continent

Ground Elevation (ft)	Original RKB (ft)	Current RKB Elevation	Mud Line Elevation (ft)	Water Depth (ft)
3,165.00	3,197.60	3,197.60, 3/28/2016		

Survey Data

MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Method	Survey Company	Build (°/100ft)	Depart (ft)	Turn (°/100ft)	Unused data
10,730	89.82	182.17	9,035.35	-2,125.66	306.63	2,139.91	1.35	Magn MWD	Baker Hughes	-0.20	2,147.66	1.33	N
10,820	90.03	184.87	9,035.47	-2,215.48	301.10	2,229.26	3.01	Magn MWD	Baker Hughes	0.23	2,235.85	3.00	N
10,908	89.82	189.03	9,035.59	-2,302.81	290.46	2,315.82	4.73	Magn MWD	Baker Hughes	-0.24	2,321.06	4.73	N
10,997	90.80	185.47	9,035.10	-2,391.08	279.23	2,403.29	4.15	Magn MWD	Baker Hughes	1.10	2,407.33	-4.00	N
11,086	90.74	185.70	9,033.91	-2,479.65	270.56	2,491.21	0.27	Magn MWD	Baker Hughes	-0.07	2,494.37	0.26	N
11,175	90.12	179.64	9,033.24	-2,568.51	266.42	2,579.67	6.84	Magn MWD	Baker Hughes	-0.70	2,582.29	-6.81	N
11,264	89.82	174.35	9,033.29	-2,657.36	271.08	2,668.64	5.95	Magn MWD	Baker Hughes	-0.34	2,671.15	-5.94	N
11,352	89.69	174.79	9,033.66	-2,744.96	279.41	2,756.58	0.52	Magn MWD	Baker Hughes	-0.15	2,759.15	0.50	N
11,441	89.82	176.40	9,034.04	-2,833.70	286.25	2,845.56	1.81	Magn MWD	Baker Hughes	0.15	2,848.12	1.81	N
11,530	89.01	176.90	9,034.95	-2,922.54	291.45	2,934.55	1.07	Magn MWD	Baker Hughes	-0.91	2,937.03	0.56	N
11,618	89.60	178.59	9,036.02	-3,010.46	294.91	3,022.53	2.03	Magn MWD	Baker Hughes	0.67	3,024.87	1.92	N
11,707	89.48	179.99	9,036.73	-3,099.45	296.01	3,111.43	1.58	Magn MWD	Baker Hughes	-0.13	3,113.55	1.57	N
11,796	89.72	181.52	9,037.35	-3,188.44	294.84	3,200.20	1.74	Magn MWD	Baker Hughes	0.27	3,202.04	1.72	N
11,884	89.66	184.20	9,037.83	-3,276.32	290.45	3,287.67	3.05	Magn MWD	Baker Hughes	-0.07	3,289.17	3.05	N
11,973	89.66	184.67	9,038.36	-3,365.05	283.57	3,375.85	0.53	Magn MWD	Baker Hughes	0.00	3,376.98	0.53	N
12,062	88.92	181.71	9,039.46	-3,453.89	278.62	3,464.26	3.43	Magn MWD	Baker Hughes	-0.83	3,465.11	-3.33	N
12,150	89.04	178.46	9,041.03	-3,541.87	278.49	3,552.08	3.70	Magn MWD	Baker Hughes	0.14	3,552.80	-3.69	N
12,240	88.83	176.19	9,042.70	-3,631.75	282.68	3,642.05	2.53	Magn MWD	Baker Hughes	-0.23	3,642.73	-2.52	N
12,328	88.89	178.71	9,044.45	-3,719.64	286.60	3,730.02	2.86	Magn MWD	Baker Hughes	0.07	3,730.66	2.86	N
12,417	90.15	179.64	9,045.20	-3,808.62	287.88	3,818.92	1.76	Magn MWD	Baker Hughes	1.42	3,819.49	1.04	N
12,506	91.26	179.19	9,044.10	-3,897.61	288.79	3,907.81	1.35	Magn MWD	Baker Hughes	1.25	3,908.29	-0.51	N
12,595	90.71	180.34	9,042.57	-3,986.59	289.15	3,996.67	1.43	Magn MWD	Baker Hughes	-0.62	3,997.07	1.29	N
12,683	90.18	179.99	9,041.89	-4,074.59	288.90	4,084.50	0.72	Magn MWD	Baker Hughes	-0.60	4,084.82	-0.40	N
12,772	90.18	177.92	9,041.61	-4,163.57	290.52	4,173.42	2.33	Magn MWD	Baker Hughes	0.00	4,173.69	-2.33	N
12,861	90.28	176.08	9,041.25	-4,252.44	295.18	4,262.42	2.07	Magn MWD	Baker Hughes	0.11	4,262.67	-2.07	N
12,949	90.74	175.34	9,040.47	-4,340.19	301.76	4,350.40	0.99	Magn MWD	Baker Hughes	0.52	4,350.67	-0.84	N
13,038	90.25	176.31	9,039.70	-4,428.95	308.24	4,439.39	1.22	Magn MWD	Baker Hughes	-0.55	4,439.66	1.09	N
13,127	90.25	178.72	9,039.31	-4,517.86	312.10	4,528.37	2.71	Magn MWD	Baker Hughes	0.00	4,528.63	2.71	N
13,215	90.31	180.06	9,038.88	-4,605.85	313.04	4,616.27	1.52	Magn MWD	Baker Hughes	0.07	4,616.48	1.52	N
13,304	90.59	178.71	9,038.18	-4,694.84	313.99	4,705.16	1.55	Magn MWD	Baker Hughes	0.31	4,705.33	-1.52	N

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13,393	90.80	179.20	9,037.10	-4,783.82	315.62	4,794.08	0.60	Magn MWD	Baker Hughes	0.24	4,794.22	0.55	N
13,482	90.52	180.11	9,036.08	-4,872.81	316.15	4,882.95	1.07	Magn MWD	Baker Hughes	-0.31	4,883.06	1.02	N
13,571	90.86	180.96	9,035.01	-4,961.80	315.32	4,971.74	1.03	Magn MWD	Baker Hughes	0.38	4,971.81	0.96	N
13,659	90.52	180.87	9,033.95	-5,049.78	313.92	5,059.49	0.40	Magn MWD	Baker Hughes	-0.39	5,059.53	-0.10	N
13,749	90.52	180.32	9,033.13	-5,139.77	312.98	5,149.28	0.61	Magn MWD	Baker Hughes	0.00	5,149.29	-0.61	N
13,838	90.52	178.21	9,032.32	-5,228.76	314.12	5,238.18	2.37	Magn MWD	Baker Hughes	0.00	5,238.18	-2.37	N
13,926	91.08	179.29	9,031.09	-5,316.73	316.04	5,326.11	1.38	Magn MWD	Baker Hughes	0.64	5,326.11	1.23	N
13,977	90.74	180.55	9,030.28	-5,367.72	316.11	5,377.02	2.56	Magn MWD	Baker Hughes	-0.67	5,377.02	2.47	N
14,002	90.74	180.55	9,029.96	-5,392.72	315.87	5,401.96	0.00	Magn MWD	Baker Hughes	0.00	5,401.96	0.00	N

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